

Amendment and Response

Applicant: Craig K. Carlson-Stevermer

Serial No.: 10/622,849

Filed: July 18, 2003

Docket No.: A126.114.102

Title: WAFER STAGING PLATFORM FOR A WAFER INSPECTION SYSTEM

IN THE CLAIMS

Please amend claims 1 and 23 as follows:

1.(Currently Amended) A wafer staging platform for a wafer inspection system comprising:

a first vacuum-assisted platform for holding a first wafer;

a second vacuum-assisted platform aligned with the first vacuum-assisted platform, the second platform for holding a second wafer;

wherein the first and second platforms are arranged one above the other and in close proximity to a processing platform.

2-4.(Canceled)

5.(Previously Presented) A handling system for a wafer inspection system comprising:

a wafer processing platform;

at least two wafer loadports, each wafer loadport configured to receive a wafer transportation cassette;

a wafer staging platform disposed closer to the wafer processing platform than any of the wafer loadports; and

a robot configured to move wafers between the wafer processing platform and the wafer staging platform.

6.(Previously Presented) The handling system of claim 5,

wherein the robot moves the wafers between one of the at least two wafer loadports and the staging platform.

7.(Previously Presented) The handling system of claim 5, wherein the wafer transportation cassette is configured for storing a plurality of wafers.

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- 8.(Previously Presented) The handling system of claim 5, further comprising:
a pre-aligner for aligning wafers prior to inspection;
wherein the robot moves the wafers between the pre-aligner and the wafer staging platform.
- 9.(Previously Presented) The handling system of claim 5, wherein the wafer staging platform comprises at least two platforms, each platform configured for holding a wafer.
- 10.(Previously Presented) The handling system of claim 5, wherein the wafer staging platform comprises a vacuum system for holding at least one wafer in place on the wafer staging platform.
- 11.(Original) The handling system of claim 5, further comprising:
a sensor to determine if a wafer is present on the staging platform.
- 12.(Original) The handling system of claim 11, wherein the staging platform comprises the sensor.
- 13.(Original) The handling system of claim 11, wherein the sensor comprises an optical sensor.
- 14.(Original) The handling system of claim 11, wherein the sensor comprises a vacuum sensor.
- 15.(Canceled)
- 16.(Previously Presented) The method of claim 23, further comprising:

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moving the first sample from the sample holder to the at least one sample loadport.

17.(Previously Presented) The method of claim 23, further comprising:

providing a pre-aligner; and

moving a third sample from the pre-aligner to the sample holder.

18.(Previously Presented) The method of claim 16, wherein moving the first sample from the sample holder to the at least one sample loadport occurs while a separate sample is being processed on the sample processing platform.

19.(Previously Presented) The method of claim 17, wherein moving the third sample from the pre-aligner to the sample holder occurs while a separate sample is being processed on the sample processing platform.

20.(Previously Presented) The method of claim 17, wherein moving a third sample includes moving the third sample from the pre-aligner to a second holder in the sample holder.

21.(Previously Presented) The method of claim 20, wherein moving the third sample from the pre-aligner to the second holder in the sample holder occurs while a second sample is being processed on the processing platform.

22.(Previously Presented) The wafer staging platform of claim 9, wherein the at least two platforms are aligned in a vertical stack.

23.(Currently Amended) A method for swapping samples in a wafer inspection system that includes at least one sample loadport and a sample processing platform

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and a robot to move samples between the sample loadport and the sample processing platform, the method comprising:

- i) storing a plurality of samples in the at least one sample loadport;
- ii) removing a first sample from the loadport;
- iii) processing the first sample on the sample processing platform;
- iv) removing the first sample from the sample processing platform;
- v) staging the first sample on a sample holder such that the sample processing platform is available for processing a second sample; and
- vi) returning the first sample to the sample loadport.

24.(Previously Presented) The method of claim 23, further comprising:

staging a second sample in the sample holder prior to processing the second sample on the sample processing platform.